



MONTANA DEPARTMENT OF TRANSPORTATION JOB PROFILE AND EVALUATION

SECTION I - Identification

Working Title: Computer Network Analyst II & III	Department	Transportation
Job Code Number: 151817	Division & Bureau	Information Service
		Division
		Applications Bureau
Job Code Title: Network Analyst	Section & Unit	Business Applications
		Section
Pay Band: 7		
Position Number : 44007, 81004, 82005, 25013, and 81116		
Work Address 2701 Prospect Ave		
Helena, MT 59620	Phone	

☐ FLSA Exempt ☒ FLSA Non-Exempt

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Work Unit Mission Statement or Functional Description

The Information Services Division (ISD) provides a full range of services for the Montana Department of Transportation (MDT). The bureaus within the division plan and set policy, and coordinate, design, install and maintain the department's information technology infrastructure. This includes network management, server systems administration, desk top and mobile computer systems administration, database administration, applications development and maintenance, integrated systems development, Internet and Intranet web page developments, data security & disaster recovery services, geographic information systems (GIS), global positioning systems (GPS), roadway information collection, user support, training, imaging services, duplication services, IT research and development, budget development and monitoring, procurement administration, contract administration, and project management. The division also includes the MDT Duplicating Services Section.

Describe the Job's Overall Purpose:

This position is responsible for all activities related to systems administration. He or she will support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system in support of the Department of Transportation's day-to-day operations. The majority of this work will be through analysis, testing and evaluation activities as well as recommendations for changes and/or replacement events. The incumbent will maintain and administer computing environments including hardware, systems software and associated configurations as well as applications software used in support of one's analysis tasks. The position will be involved in diagnosing more complex hardware and software problems, identifying strategies to improve the infrastructure both on the network and server platforms. He or she will be involved in the planning, coordination and implementation of security measures to protect data, software and hardware and all aspects of Disaster Recovery to ensure our environment stability. The incumbent designs, configures and tests complex computer hardware, networking software and operating system software.

SECTION II - Major Duties or Responsibilities % of Time

A. Maintain Operating Systems (60%)

Manages performance and maintains security of ISD network. Works with multiple hardware and software platforms. Perform analysis and design for upgrades to current technology including impact analysis of available options. Use currently accepted methods of business process analysis and system analysis, and made recommendations for changes within ISD. Provide technical support to users.

Level 1

- 1) Performs analysis and design for upgrades to current technology including consideration of impact of all available options
- 2) Uses knowledge of operating system utilities; performs complex scoping assignments.
- 3) Conducts complex database performance and tuning on at least one DB platform.
- 4) Performs risk management.
- 5) Leads medium to large projects and critical projects that impact the entire division; focusing on true business requirements gathering; provides time and resource estimates for project completion.
- 6) Plan, coordinate, and implement network and other security measures to protect data, software, and hardware including wireless networks and firewalls.
- 7) Manages system upgrades including test plan preparation. Provides direction to staff as appropriate.
- 8) Designs/architects network design and/or database design.
- 9) Performs routine maintenance on all servers maintaining OS knowledge including unique features of each.
- 10) Provides leadership and accountability for MDT's AD (Active Directory) environment and/or SAN environment.
- 11) Addresses AD security, fault tolerance and policy design
- 12) Estimate change impacts in terms of time, resources and lost benefit.

Level 2 (In order to advance to level 2, the incumbent must be proficient, fully functional and demonstrate their ability to perform all Level 1 duties)

- 1) Analyzes products and recommends use of new products and services. Performs research and development for new technologies and tools. Performs analysis and design of proposed upgrades. Provides impact and cost/benefit analysis for options.
- 2) Functions as a member of the strategic direction committee; -- helps define vision; identifies timelines, goals that would insure the implementation of all approved technology initiatives.

- 3) Evaluate the impact of changes resulting from either legislative action or ITSD.
- 4) Provides technical leadership in at least two areas of networking, security, database or storage; complete the more difficult technical tasks in these areas.
- 5) Manages the data center including space, equipment location, structural or supporting hardware changes needed, etc.
- 6) Able to effectively lead large or critical projects which impact the entire Agency. Estimates change impact on resources. Performs or directs business requirements gathering and ensures the proposed solution supports the business need. Develops time and resource estimates for project completion and conforms to MDT's SDLC standards.
- 7) Provide prioritized recommendations regarding technology, based on business need.

B. Document Processes and Outputs (40%)

Follow MDT's documentation standards to develop and maintain documentation and to provide status reports and updates using MDT's productivity tools. Maintain operations documentation for individual restorability and Disaster Recovery. Develop and provide security reporting necessary for senior technicians. Provide status reports and regular updates to supervisor or project lead.

Level 1

- 1) Develop and document change management procedures for various technical specialties; documents the processes/procedures.
- 2) Develop and write position papers as directed.
- 3) Presents designs, including prototypes as applicable to IS staff and Management.
- 4) Establish and document networking, database, and/or security standards throughout the division.
- 5) Create and maintain Disaster Recovery documents identifying emergency measures policies and procedures. Leads disaster recovery planning and testing.
- 6) Prepares and conducts presentations to IS staff and management. Present designs, including prototypes as applicable.
- 7) Use currently accepted methods of business process analysis and system analysis, and makes recommendations for changes within ISD.
- 8) Provides regular updates to upper management on large or critical system activities.
- 9) Maintains a general understanding of the various divisions and their use of IS resources.

Level 2 (In order to advance to level 2, the incumbent must be proficient, fully functional and demonstrate their ability to perform all Level 1 duties)

- 1) Provides impact analysis for all technology projects impacting more than one division.
- 2) Establishes technology standards for MDT including documentation standards within the Systems and Operations team; plays a critical role in all related ISD policy and procedure development.
- 3) Fully comprehends MDT business and process as it relates to systems and infrastructure; determines technology prioritization in conjunction with management.
- 4) Identifies all needed documentation for the execution of the section's duties and working through management ensures that it is kept current.

- 5) Owns the physical piece of Disaster Recovery and all necessary documentation; performs the testing.
- 6) Develops a specific understanding of at least one business division's technology needs.

C. Staff Support (40%)

Maintain active interactions with ISD staff, consultants, and vendors. Provide next level support and mentoring for user support staff. Participate in development of white papers and in review of best practices for MDT.

Level 1

- 1) Provides guidance, mentoring, support for band 5 and 6 technical staff.
- 2) Present designs and white papers to management.
- 3) Confer with non-MDT analysts on best practices.
- 4) Aids in the determination of ISD architecture (both applications and operations).
- 5) Reviews recommended changes to improve existing systems and network configurations and determines go/no go decision; presents to management

Level 2 (In order to advance to level 2, the incumbent must be proficient, fully functional and demonstrate their ability to perform all Level 1 duties)

- 1) Provides mentoring to all within ISD on areas of expertise; shares knowledge gained at technology conferences.
- 2) Identify needed technical training for staff. Provide on-the-job training.
- 3) Represent ISD on cross agency technical committees; interacts with the public and federal government representatives as appropriate.
- 4) Provides Program Management support to projects led by other staff members.
- 5) Act as vendor liaison as appropriate handling contract front end activities.

1. The most complicated aspect of this position is?

A network analyst needs to be proficient in operations requirements to fulfill on-call rotational duty responsibilities. The position requires using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. The incumbent will be required to identify, develop, and evaluate options and implement solutions. He or she will need to possess a broad level of understanding regarding business divisions and their use of ISD provided technology and applications.

2. What guidelines, manuals or written procedures support this position?

Laws, regulations, guidelines, manuals or procedures available to the incumbent include MCA, ARM, Information Services Division policies and operational procedures, system manuals and documentation, Montana Operations Manual, SABHRS manuals, MDT ISD and state information technology standards, department operating procedures, and technical system references. Primary guides for the work are found in standards of the profession and current best practices in information technology. Available references include various software and system manuals and technical documentation.

3. Does this position supervise others? ☐ Yes ☒ No

Number directly supervised:

Complexity level of the positions supervised .

Position Number(s) of those supervised .

4. This position is responsible for:

☐ Hiring

☐ Firing

☐ Supervision

☐ Pay Level

☐ Performance Management

☐ Promotions

☐ Discipline

☒ Other: Provides limited work direction to others

5. Attach an Organizational Chart.

SECTION III - Minimum Qualifications - List minimum requirements for the **first day** of work.

Critical knowledge and skills required for this position:

Knowledge

Expanded knowledge or experience with computer operating systems (both server and PC) specific to MDT (currently VMS, Linux, Windows 2003); Expanded network administration understanding (Cisco equipment or VPN, Wireless or other technology), Expanded Oracle and/or SQL database or security understanding (AD, DB and/or file); Expert in at least two of the previous disciplines. Understanding of the basic relationship between the different architectures and their impact on each other – within MDT and the state infrastructure

Skills

Reading Comprehension, Active Listening, Writing, Speaking, Logical and Analytical Thinking, Deductive and Inductive Reasoning, Complex Problem Solving, Active Learning, Service Orientation, Operations Analysis, Troubleshooting, Quality Control, SDLC, MS Office (Word, Excel, Outlook, Powerpoint), keyboarding, Scripting languages (at least 3), Negotiation and/or Persuasion, Judgement and Decision Making, Systems Analysis, Leadership and Influencing, Team Building

Behaviors required to perform these duties

Levels 1 and 2

Plan, Organize, Gather Information and Conduct Research

Define an end result. Set or follow a course of action to achieve it. Anticipate potential obstacles and monitor progress. Organize tasks into component parts in a rational, methodical way. Collect and use relevant information, data, and opinions.

Identify Problems

Assess situations in a logical and methodical way based on facts. Seek root causes. Recognize patterns, connections, themes, and issues. See implications and consequences of a situation or information.

Creativity and Problem Solving

Generates ideas, fresh perspectives and original approaches; open-minded; uses creativity and originality when problem-solving. Goes beyond traditional ways to address issues and problems and then develops feasible solutions based on logical assumptions and factual observation that reflect consideration for resources, constraints, organizational values and goals.

Provide Analytical Thinking and Deductive Reasoning

Uses logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems, work tasks and strategies; able to demonstrate that conclusions reached utilizes previously known facts such that the individual can quickly eliminate possible causes (and solutions).

Personal Accountability and Ownership

Accepts individual responsibilities for all actions taken; Reliable – honors commitments; is self-motivated yet is able to take direction from supervisor or senior team members. Able and willing to align behavior with the needs and goals of the organization and provide a visible role model for others. Holds self accountable for organizational activities, services, decisions, successes and failures, and subsequently performs the job with broader goals in mind.

Prioritizing, Multi-tasking, Balancing Multiple Projects

Recognize or establish the relative importance of multiple issues, tasks, and opportunities to maximize the productivity of the organization.

Quality, Accuracy, Attention to Detail

Achieve excellent work results by attending to details. Demonstrate an appropriate level of precision to complete projects successfully and to execute job responsibilities in a timely manner.

Reading Comprehension

Demonstrates ability to take information provided in manuals and convert it into identifiable actionable steps. Successfully reviews white papers, technology updates and provides synopsis for management decisions.

Listening

Give full attention to and make a conscious effort to hear other's ideas, concerns, questions, and issues with interest, empathy, and objectivity. Paraphrase and ask questions to ensure understanding of the message when required.

Responsiveness, Follow up

Assumes responsibility for and delivers on commitments to the customer. Initiates contacts to clarify issues or problems in a timely manner. Keeps the customer up-to-date about projects.

Results Oriented

Achieve goals and bring projects to completion. Investigate, calculate, and proceed through a project or task to bring about a conclusion. Persist and stay focused when faced with a series of challenging or uncertain situations. Demonstrate a concern for working well or for competing against a standard of excellence.

Understanding, Sensitivity, Trust Building

Interact openly and honestly. Encourage others to express viewpoints. Listen and respect different viewpoints. Address misunderstandings directly with those involved. Maintain confidences. Demonstrate an awareness of nonverbal as well as verbal communication. Elicit trust from others by showing honesty, reliability, and integrity.

Critical Thinking and Inductive Reasoning

Use a disciplined process of actively conceptualizing, analyzing, and applying information as a guide to action. Applies that thought process whether pursuing issue resolution, making recommendations and/or seeking strategic vision opportunities. Utilizes inductive logic based on a small number of observations or experiences to determine whether the likelihood of something happening is sound such that the individual can predict outcomes, is more able to estimate timetables, etc.; forms relationships between seemingly unrelated events.

Decision Making

Makes decisions in a timely fashion and recognizes when the decision making level is not theirs. Able to analyze all information, organize thoughts, consider the cause and effect for each decision and document the final decision. Expresses and presents the final decision to management and/or the user community. Challenges the status quo by taking calculated actions in complex, ambiguous, contentious, or hazardous situations to force an issue or set a direction.

Relationship Building

Builds short and long-term relationships with people critical to work and project success; builds constructive and effective relationships with internal and external customers. Is respected as a

valid resource through consistent actions and behaviors; builds the appropriate rapport required to do business. Openly demonstrates an understanding of and respect for the value of coworkers' contributions to the MDT mission. Makes appropriate or acceptable compromises in order to meet goals and to gain cooperation from others

Influence and Persuasion

Transfers thought into productive action. Create successful outcomes by sharing knowledge and information within the work unit and across organizational lines. This includes mentoring others, building relationships key to success by establishing trust, credibility and rapport with key players and customers. These employees use awareness of the organization (i.e. structure, centers of authority, decision making roles) and knowledge of the different roles and power positions within the organization to positively affect results.

Team Building

Stays focused to achieve results. Actively participates and respects the ideas of others. Look for alternative ways to work with others that will create better results and working relationships. Motivates team members with diverse goals to collaborate and cooperate to achieve success.

Leadership

Share information, feedback and knowledge (two-way communication) with key persons inside and outside of the organization to ensure successful project outcomes and/or improvement; includes training, teaching and coaching others. Actively steps into a leadership role.

Demonstrate Flexibility

Modifies ideas, strategies, approaches and/or styles to reach a goal in light of changing circumstances; maintains effectiveness in varying environments and with different tasks, responsibilities and people; adapts actions to meet desired business results.

Speaking Effectively

Express and present thoughts and ideas clearly, succinctly, and in an understandable manner individually and in a group. Adjust language, delivery, or terminology to meet the needs of the audience. This competency includes any type of verbal communication such as giving presentations, providing training, giving testimony, speaking in person or by phone.

Writing Effectively

Express and present information and ideas in writing which is clear, succinct, and understandable. Adjust the language, writing style, and terminology used to meet the need and level of understanding of the reader. Utilize knowledge of the structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar. (This competency includes any type of formal or informal written communication: i.e. letters, reports, studies, presentations, articles, rules, policies, procedures, and manuals.)

Level 2 Additional Behaviors**Change Agent**

Engage others in order to develop innovative solutions. Introduces new ways of thinking and behaving. Introduces new technology and tools. Encourages innovation and implements nontraditional ideas. Creates and implements new concepts, models, theories and relationships to address work in new ways; motivated others to seek best practices.

Catalyst

Focus efforts and energy on successfully attaining organizational goals and objectives. This includes making difficult decisions and persisting even when confronted by obstacles or adversity and may involve questioning status quo assumptions. Assume accountability for decisions, actions and results, follow through on issues to completion, point out problems and ask questions others may have overlooked or been reluctant to acknowledge. Requires an understanding of organizational relationships, identification of decision makers and the relationship of positions within the agency.

Judgment / Decisiveness

Commit to a sensible, logical and effective action after considering alternative actions and their consequences on the resources, constraints and values of an organization. Makes decisions that reflect professional conviction and accountability in a timely fashion. Makes valid assumptions when information is unclear or lacking.

Education:

Check the one box indicating **minimum** education requirements for this position for a new employee the **first day** of work:

- | | |
|---|--|
| <input type="checkbox"/> No education required | <input type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent | <input checked="" type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree |

Required/Acceptable degrees: Bachelor's Degree in Computer Science or a closely related field such as Information Systems Design or Computer Programming.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

Experience:

Check the one box indicating **minimum** work-related experience requirements for this position for a new employee the **first day** of work:

- | | |
|---|---|
| <input type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 to 4 years |
| <input type="checkbox"/> 1 to 2 years | <input checked="" type="checkbox"/> 5 or more years |

The level of experience for a **Level 1** Computer Network Systems Analyst with the BA degree in Computer Science would be 6 years.

The level of experience for a **Level 2** Computer Network Systems Analyst with the BA/BS degree in Computer Science would be 8 years.

Other specific experience (optional):

Specific skills in one or more areas; such as: Security, Database, Network Configuration including demonstrated Project Management (PM) skills and acting as project lead (PL) on multiple occasions.

Alternative Qualifications:

This agency will accept alternative methods of obtaining qualifications. ☒ Yes ☐ No

- 1) College courses completed will be evaluated on a case by case basis to potentially reduce the years of experience required. Thirty (30) completed and passed semester credits (or the equivalent in quarter credits) from an accredited college or university may be considered as one year of college.
- 2) In replacement of the related Bachelor's Degree requirement for a **Level 1** Computer Network Systems Analyst, MDT would accept:
 - an AS Degree in Computer Science or Computer Information Systems and a minimum of 8 years of general technical data center operations or systems management experience **OR**
 - no degree and 10 or more years of general technical data center operations or systems management experience.
- 3) In replacement of the related Bachelor's Degree requirement for a **Level 2** Computer Network Systems Analyst, MDT would accept:
 - an AS Degree in Computer Science or Computer Information Systems and a minimum of 10 years of general technical data center operations or systems management experience **OR**
 - no degree and 12 or more years of general technical data center operations or systems management experience.

Other education, training, certification, or licensing desired (specify): Working knowledge of and or experience with computer operating systems for both server and personal computer; such as Linux, Unix, VMS and/or Windows; working knowledge of the Oracle RDBMS and its related tools specifically; database structure at a more generic level, or a similar working knowledge of network equipment, tools and techniques or general network administration. Certifications such as MCSA, CCNA or CCDA, LPIC or RHCT are desirable.

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: Title

Signature Date

Immediate Supervisor:

Tom O'Sullivan Systems Operations Section Supervisor
Name: Title

Signature Date

Division/District Administrator:

Michael G. Bousliman Division Administrator
Name: Title

Signature Date

Department Designee:

Name: Title

Signature Date

Recruitment Review: My signature below attests to my review of and determination that the minimum qualifications (education and experience) listed in this profile meet the established recruitment standards of MDT.

Name: Human Resource Specialist (Helena/District)
Title

Signature Date

